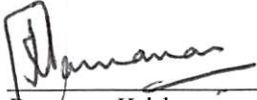


RADIATION SAFETY PROGRAM ENFORCEMENT POLICY

University of Houston faculty, staff, and students must comply with federal and state regulations and University policies and procedures when conducting research, clinical and teaching activities with, or storage of, radioactive materials and ionizing radiation producing devices. This also applies to faculty, staff and students using radiological materials or devices under University sponsored research agreements at off-campus sites. The policy outlined below establishes a more formalized procedure. All Principal Investigators (new and existing) are required to acknowledge this policy as a condition of authorization.

Approved By: 
Ramanan Krishnamoorti
Interim VC/VP of Research & Technology Transfer

Effective Date: 3/17/17

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TO: ALL RADIATION SUBLICENCEES & REGISTRANTS

FROM: UNIVERSITY OF HOUSTON'S RADIATION SAFETY COMMITTEE

SUBJECT: RADIATION ENFORCEMENT ACTIONS

DATE: March 17, 2017

Radiation Safety regulations require immediate shut down of operations when necessary in emergency situations or unsafe conditions. There are many cases at the University of Houston where non-compliance or a lack of cooperation from Principal Investigators (PIs) and/or their Authorized Users (AUs) may not qualify as unsafe procedures or emergencies, but could still jeopardize the Institution's licenses and registrations if not addressed in a timely manner. Formalized enforcement actions will assist in dealing with situations where a lack of cooperation from PIs and AUs could result in non-compliance with safety and regulatory requirements, and/or warrant regulatory reporting with the potential for a notice of violation. The enforcement actions in this policy were proposed, agreed to, and adopted by the Radiation Safety Committee (RSC), and approved by the Vice Chancellor/Vice President for Research and Technology Transfer. The policy outlines enforcement actions for Radiation Safety requirements as described in the Radiation Safety Manual, as well as in initial and refresher Radiation Safety training courses. New PIs will be required to acknowledge their understanding by signing off on this policy as part of the application process. Current PIs will be required to acknowledge the expectations on a signature page as a condition to maintain their authorization.

NOTIFICATION: Upon discovery of non-compliance, a memorandum will be sent to the PI by email with required actions to resume operations clearly outlined. In some cases, the notification will specify a time to comply, together with consequences of non-compliance (e.g. immediate shut down). The memorandum will be distributed to the Department Chair and/or College Dean, Associate Dean of Research, Radiation Safety Committee Chair, VP/VC of Research and Technology Transfer or representative, and EHLS Director. A signature page will be included for acknowledgement of responsibility by the PI and Chair.

FAILURE TO COMPLY: If after 30 days of receiving a notification of violation, compliance is not achieved and/or no response is received from PI, this will be deemed a "Failure to Comply." If the responsible PI is absent or not available, the Department Chair or College Dean will assume responsibility to handle the issues in question. One possible remedy to a non-compliance situation is for the PI to declare the equipment "inactive" until the safety

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issues can be addressed. For example, if funding is not available or there are other extenuating circumstances where the PI cannot achieve timely compliance, the PI can request that the equipment remain inactive and not used for a period of time until the problem is addressed.

LOCKOUT AND TAGGED METHODS: Methods used to lock out radiation-producing machines or radioactive material activities in a “Failure to Comply” situation will include but are not limited to the following:

- removal of sources from the lab,
- card reader access restrictions,
- physical locks on the equipment or storage location,
- IT lockout of local/networked computer to the equipment interface,
- disabling of the equipment via (a) a locking mechanism for power cords, (b) electrical disconnection through feasible means in partnership with Facilities Services, etc.

When applicable, the RSC will require the PI to specify a suitable and acceptable means of locking out or disabling the functionality of the equipment as part of the SOP. This will allow the Radiation Safety Officer (RSO) and RSC to shut down radiation-producing equipment, or remove radioactive sources in cases of non-compliant or unsafe situations.

During a Lockout/Shut-Down period the source will be labeled (tagged) as to why it is locked out to warn others not to inadvertently bypass the lockout.

SECTION 1.0 PURCHASE VIOLATIONS

[MAPP 04.01.01](#) requires the purchase of radioactive material, x-ray machines and Class 3b & 4 lasers via purchase requisition with pre-approval from Environmental Health & Life Safety (EHLS). Compliance with the purchase policy is critical to the University's effectiveness in properly regulating radiation-producing devices. Purchases made without prior approval limits the ability to maintain adequate inventory as required by regulations. Also, without prior knowledge of new purchases and installations, it is difficult to review safety controls to ensure personnel safety.

Consequences for any Principal Investigator and/or University of Houston staff member who procures radioactive material, x-ray machines and/or Class 3b & 4 lasers by means other than a purchase requisition (P-card, employee reimbursement, purchases without a purchase requisition, etc.):

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- First Violation – A memorandum to the offender as described above.
- Second Violation – Probation for up to one year.
- Third Violation – Permanent suspension of P-card privileges. The Committee will initiate administrative referrals to the Office of Finance Accounts Payable Department.

SECTION 2.0 RADIATION SAFETY VIOLATIONS

All radiation source(s) and/or radiation-producing machine(s)/device(s) including Class 3b and 4 lasers require permission from the RSO and RSC before any operation or testing. This permission is the responsibility of the PI and it will detail the materials authorized, their locations and operational parameters. Any deviation from these permitted operations is a violation of UH Radiation Safety Policy and subject to sanctions as listed above.

2.1 Unsafe Actions and Emergencies

Unsafe actions and emergencies will result in immediate shut down of operations. A notification memorandum as described above will be sent to the responsible PI with details of what happened, the magnitude and/or what actions are required to resume operations.

2.2 Unapproved Installation and/or Use of Radiation Sources/Devices

If a radiation source and/or radiation-producing machine/device is discovered to be in use or installed without notification to (or approval from) Radiation Safety, (this includes set up of a laser or x-ray unit previously designated as “in storage”, or significantly changing an installation without notifying Radiation Safety for evaluation) the RSO is authorized by the RSC to shut down operations immediately and send a notification memorandum to the responsible PI as described above.

- **Radioactive Material** – The RSO is authorized to retrieve, or take control of, source(s) (open or sealed) for storage in the Radiation Waste Facility. Sources will be returned (if possible) to the PI when compliance is achieved. If the PI fails to comply, the source(s) will be disposed of as radioactive waste. For non-portable sources/devices, the RSO is authorized to lock out equipment using appropriate means as described above.

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- **X-rays and/or Lasers** – The RSO is authorized to lock out radiation-producing equipment/devices using appropriate means as described above. A notice and tag will be posted on the laboratory door and on the equipment/device.

2.3 Unauthorized Move of Radiation Sources/Devices to a New Location

PIs are required to notify Radiation Safety for approval prior to moving a radioactive source/device from its authorized location. This includes changing storage locations, transferring/loaning devices to another PI or moving installations/work areas. In the event of failure to obtain approval, the RSO is authorized to shut down operations immediately and will send a notification memo to the responsible PI as described above. The PI will be required to submit to safety evaluations of the new location prior to receiving authorization to conduct research at that location.

SECTION 3.0 RADIATION WORKER TRAINING VIOLATIONS

The University of Houston's license and registration agreements with the Texas Department of State Health Services require initial and annual refresher training for all personnel working with radioactive material, x-ray machines and Class 3b/4 lasers, including Principal Investigators. While initial training is instructor-led, refresher trainings are web-based and can be efficiently accomplished by any faculty, student or staff member with internet access. Radiation Safety staff have the responsibility to update content as needed to reflect regulatory updates, internal policy changes and recurring non-compliance items.

3.1 Initial Training Non-Compliance

All PIs and AUs are required to complete the initial instructor-led training before being authorized to use radioactive materials, x-ray machines and laser devices as a PI and/or AU. Failure to complete initial safety training or to obtain interim authorization from the RSO prior to using radioactive materials, x-ray machines and laser devices will warrant the following enforcement actions:

- The individual must immediately cease use of all radioactive materials, x-ray machines and/or laser devices at the University.

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- A notification memorandum as described above will be sent to the individual and responsible PI describing the training violation and necessary actions to obtain proper authorization for the individual.

3.2 Interim Authorization Non-Compliance

To accommodate research needs in cases where the instructor-led training schedule is not optimal, interim authorization may be granted by the RSO to PIs and/or AUs, with a requirement to complete initial training by a certain date. Failure to complete initial training by the stipulated date will result in the following actions:

- Immediate loss of Authorized User privileges for the individual.
- A notification memo will be sent to the individual and responsible PI detailing the loss of privileges and required actions for reinstatement.

3.3 Refresher Training Non-Compliance

Every PI and AU will be notified to complete annual refresher training with the due date specified. PIs will also receive a list of their authorized users that are delinquent in training. Consequences of training violations will accompany the notices. PIs will be copied on training notification to their Authorized Users and are responsible for ensuring that their Authorized Users complete applicable refresher trainings as required.

- AU Expired Training – A one-time reminder and 30 day extension will be granted to all users and PIs upon expiration of their training.
- 30 Days Overdue:
 - Authorized Users* – A notice of suspension will be sent to the Authorized User with the PI copied. The notice will include actions required for reinstatement.
 - Principal Investigators* – The PI’s radioactive material/device activities will be shut down as described above until compliance is achieved.
- Chronic failure by PIs to ensure that their Authorized Users complete required refresher trainings will result in a shut-down of activities with radioactive materials/devices as described above in the section titled “Failure to Comply.”

3.4 Training Exemptions

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Inactive PIs and their Authorized Users will be exempted from refresher training requirements. To receive this exemption, the PI must have received an INACTIVE STATUS classification from the Radiation Safety Committee. Reinstatement from inactivity will require appropriate training as determined by Radiation Safety Office.

PI Acknowledgement: _____ **Date:** _____

Cc: Applicable Department Chair or College Dean
EHLS PI File